Amendments to the Specification:

Please replace the paragraph on page 6, lines 12 to 20, with:

--The inhomogeneities produced in this way within the process space lead to a nonuniform distribution of the material parameters of the treated semiconductor substrates within a batch and, associated with this, to different electronic and layer properties of the same component on different wafers of a batch. However, in microelectronics, in particular, extremely stringent requirements are made of the stability and the reproducibility of the fabrication steps of the electronic components.--

Please replace the paragraph on page 7, line 25 to page 8, line 12, with:

--Furthermore, in order to balance the layer thicknesses obtained, it is possible to provide a temperature gradient within the process space. The deposition rate which is increased at a higher temperature makes it possible to counteract the depletion of the component to be deposited in the main gas flow. Temperature differences of several degrees are not infrequent, as during nitride deposition, in particular. With this method, although it is possible to achieve uniform layer thicknesses within a batch, the wafers of a batch nonetheless experience a different thermal budget. As a result, in later process steps, differences may occur in

the processing of the wafers or, in the finished product, differences may occur in the electronic parameters between chips from different wafers. Very often it is not possible to compensate the differences between bottom and top, so that the only remaining action is to diminish the batch size.--

Please replace the paragraph on page 18, lines 22 to 24, with:

--The vapor phase deposition can take place at atmospheric pressure, subatmospheric pressure, and in the near-vacuum or vacuum range, ~~subatmospheric~~ low pressure is preferred.--

Please replace the paragraph on page 30, line 14, to page 31, line 13, with:

--Fig. 3 diagrammatically shows the distribution of the layer thickness produced during the individual process stages of the method. In this case, the ordinal number of the wafer 6 within the stack is specified on the X axis. The wafer 1 is arranged at the lower end in Fig. 1, while the wafers with higher numbers are arranged correspondingly further up in the boat 4. The layer thickness growth is specified on the Y axis. If the process gas is introduced into the process space 3 through the first feed/discharge line 7 and passed out of the process space through the second feed/discharge line 12, then a higher layer thickness growth takes place on wafers with a low ordinal number than on wafers with a high ordinal number since

the former are arranged nearer to the first feed/discharge line 7, and the process gas flow has a high concentration of the component to be deposited. If the layer thickness growth is measured, then ~~curve "A"~~ region "A" illustrated in Fig. 3 is obtained. After reversing the flow direction, the process gas then flows into the process space through the second feed/discharge line 12 and is passed out again via the first feed/discharge line 7. The wafers with a high ordinal number then correspondingly experience a more pronounced layer thickness growth than the wafers with a low ordinal number. If the layer thickness growth is measured, ~~curve "B"~~ region "B" illustrated in Fig. 3 is correspondingly obtained. Since the two ~~curves~~ regions "A" and "B" are ultimately added, curve "C" is obtained after carrying out the method.--